

1.26.33

concerning

DOUBLE
HUNG
SASH

by the
ARCHITECTS

T

HE designs shown in this book represent the selections from several hundred drawings submitted in the Samson Double Hung Sash Contest. The judges were Mr. A. Lawrence Kocher, Editor of the Architectural Record, Mr. Benjamin F. Betts, Editor of the American Architect, and Mr. Kenneth K. Stowell, Editor of the Architectural Forum.

An advance mailing of this book has been made to all entrants in the contest, with a ballot. By means of these ballots four designs have been selected for special awards. Designs are identified by numbers and a slip will be found enclosed identifying the winners.

Every design submitted had merit—many were exceptional—and the task of the judges was not easy.

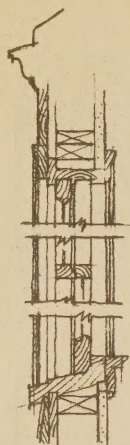
In a contest all cannot win—some must be disappointed. We know the judges were impartial, and in no way was their judgment influenced.

We appreciate the co-operation of the many architects who have participated.

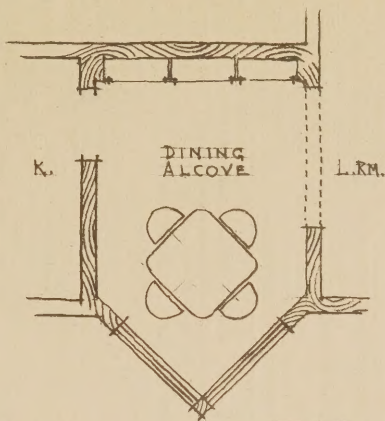
To the winners we extend our congratulations.

**SAMSON CORDAGE WORKS
BOSTON, MASS.**

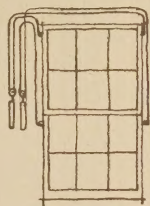
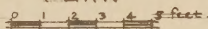
SHOWING USE of DOUBLE HUNG WINDOWS IN DINING ALCOVE of COTTAGE



SEC. THRU WINDOW.

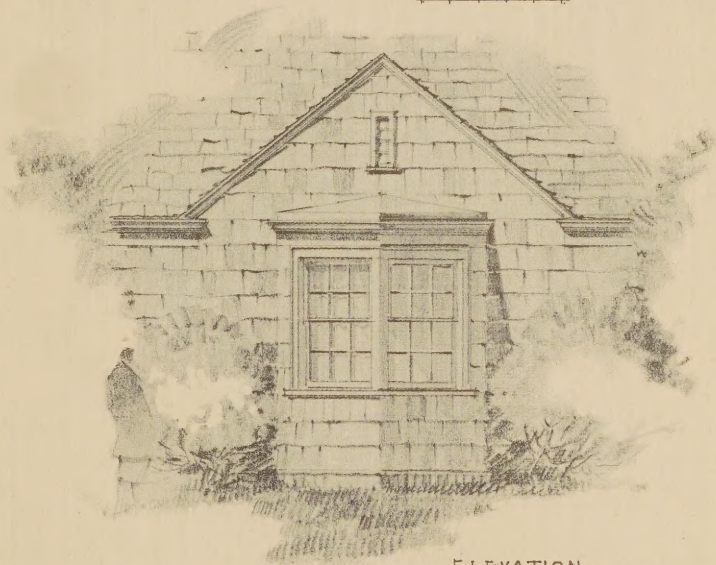


PLAN



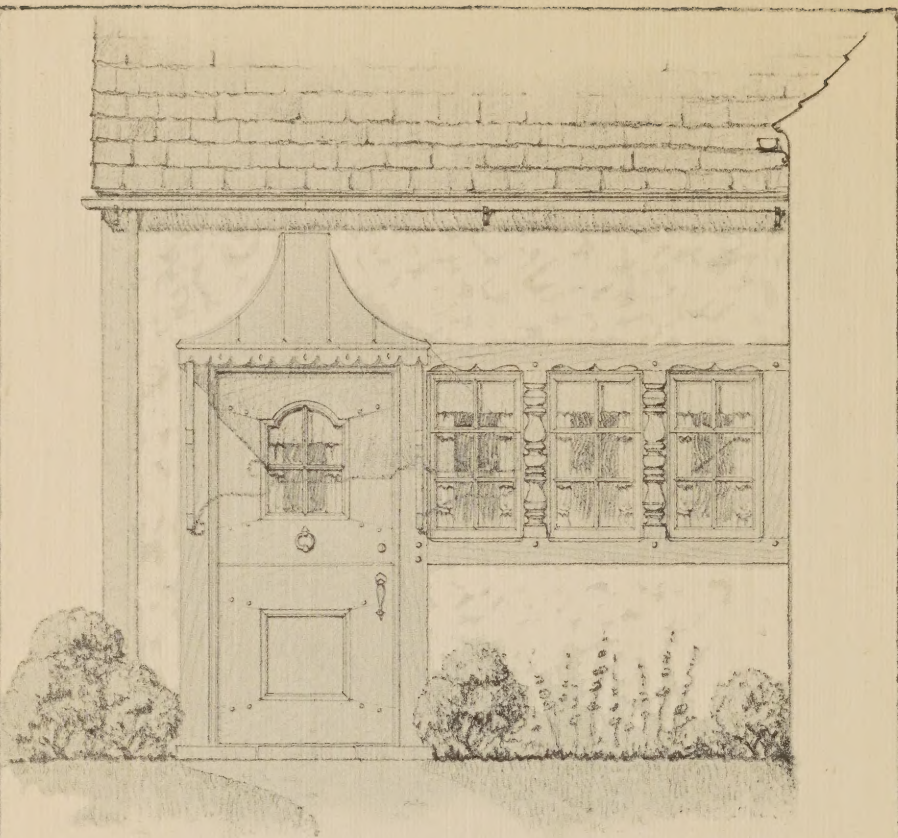
OF MULLION

DIAGRAM OF SASH ROPING.



ELEVATION.

A simplified projecting bay for a dining alcove, or breakfast room, suitable to a small home. This unique arrangement of plan provides for a good view of the yard, it lends itself to a fresh, interesting exterior treatment, and from a sash operating standpoint makes a double hung type of window the ideal selection.

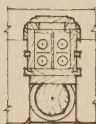


• ELEVATION •

• SCALE • $\frac{1}{2}$ " = 1'-0"

ATTRACTIVE DESIGN •
YET •
COMPLETE VENTILATION •

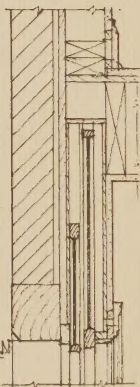
ASIDE FROM THE DESIGN THESE WINDOWS ARE ALSO
 EXTREMELY PRACTICAL IN MAKING POSSIBLE COM-
 PLETE VENTILATION, BY CONTINUING THE FRAME UP
 INTO THE HEAD, ALLOWING BOTH SASH TO SLIDE ENTIRELY
 UP INTO THE POCKET, LEAVING THE ENTIRE OPENING CLEAR.



PLAN-SECTION
 THRU • MULLION

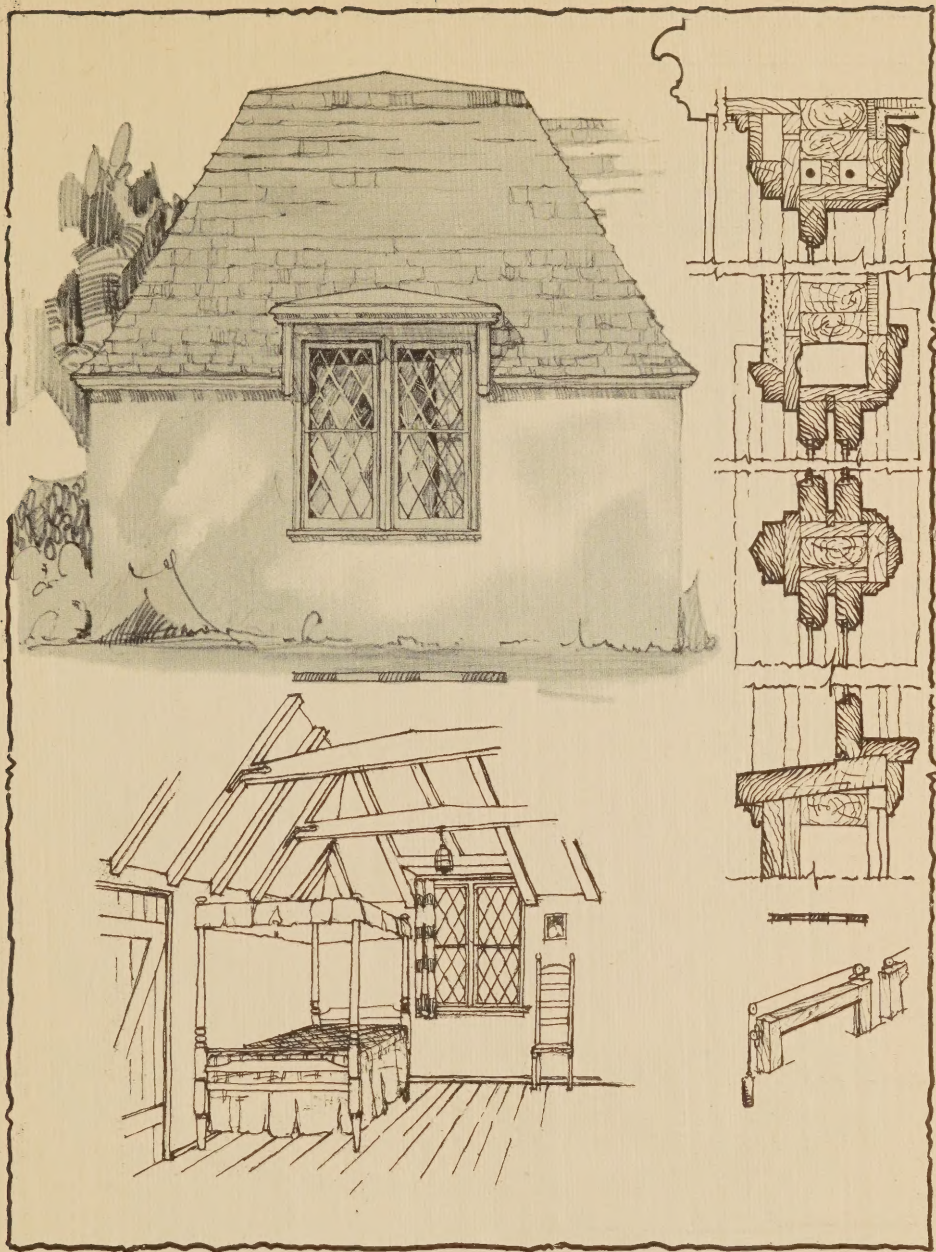
SCALE • 1" = 1'-0"

HEAD • SECTION



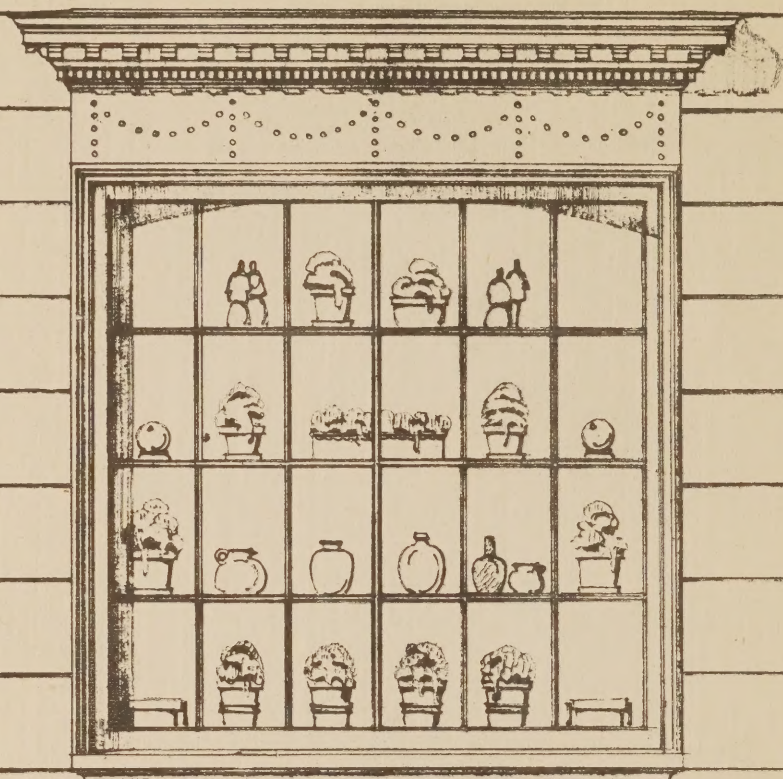
No. 34C

The difficult problem of designing a group of windows that are tied in with the entrance doorway is solved in this design of English character. For a small house this group may be at the main entrance into a hall, or, for a large house it may be the kitchen entrance, the windows being over the sink. The upper sash may be lowered and the lower sash raised for a scientific ventilation, or both sash may be raised entirely up into a pocket in the head making an entirely clear opening and complete ventilation.

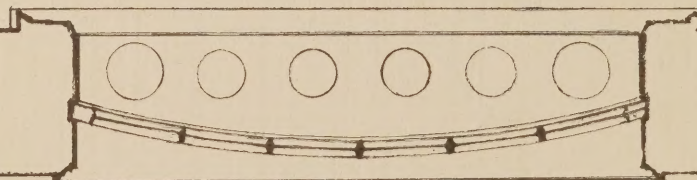


No. 58A

The slender lines of this mullion make it very desirable for refined residential work. The frame is so constructed as to eliminate the weight box in the mullion. This is accomplished by running the mullion sash cord through the finished head and across to the jamb. The mullion and jamb sash cords are then both attached to the same sash weight in the jamb weight box.



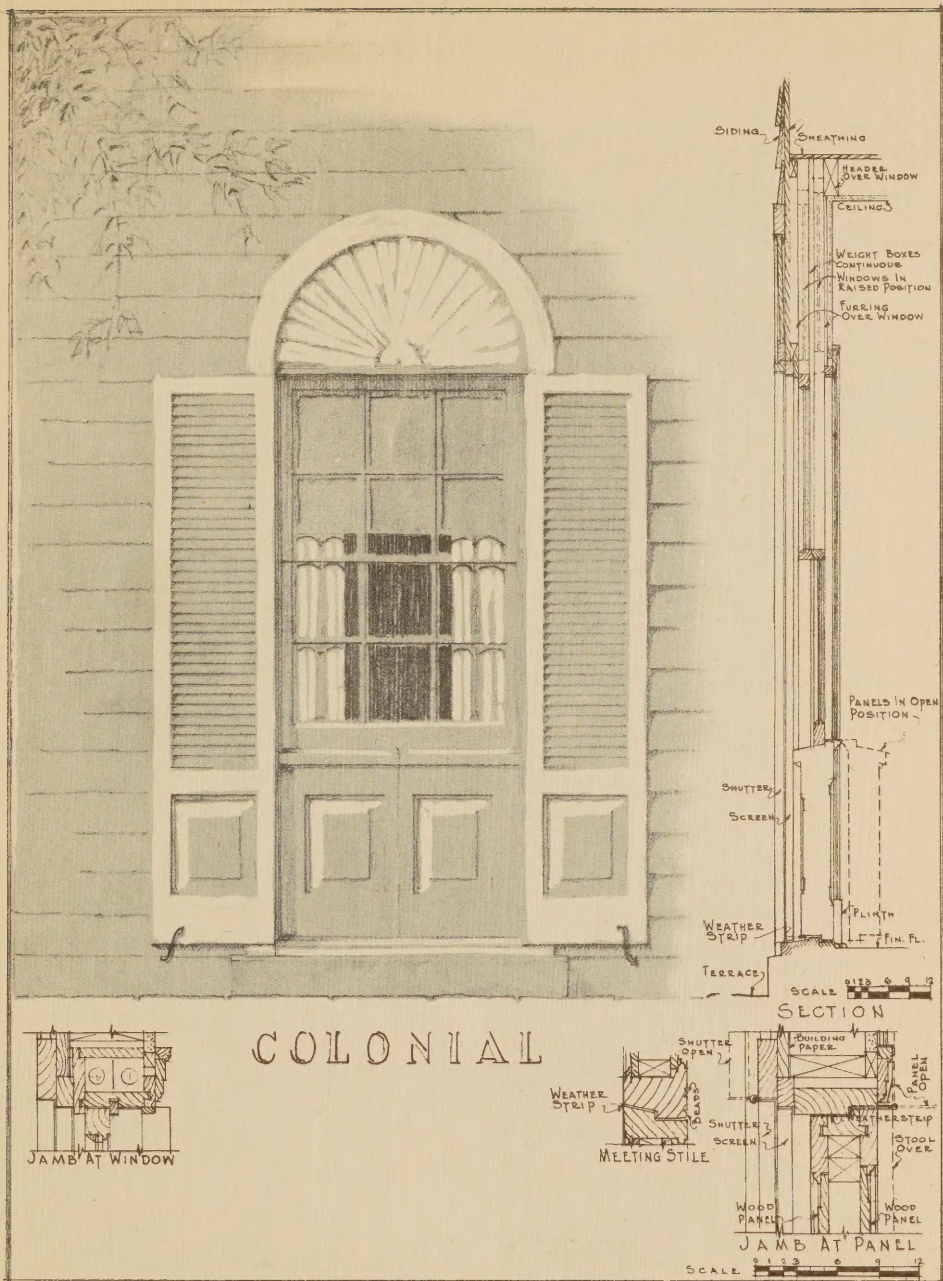
~ E L E V A T I O N ~
SCALE 1 INCH



~ P L A N ~

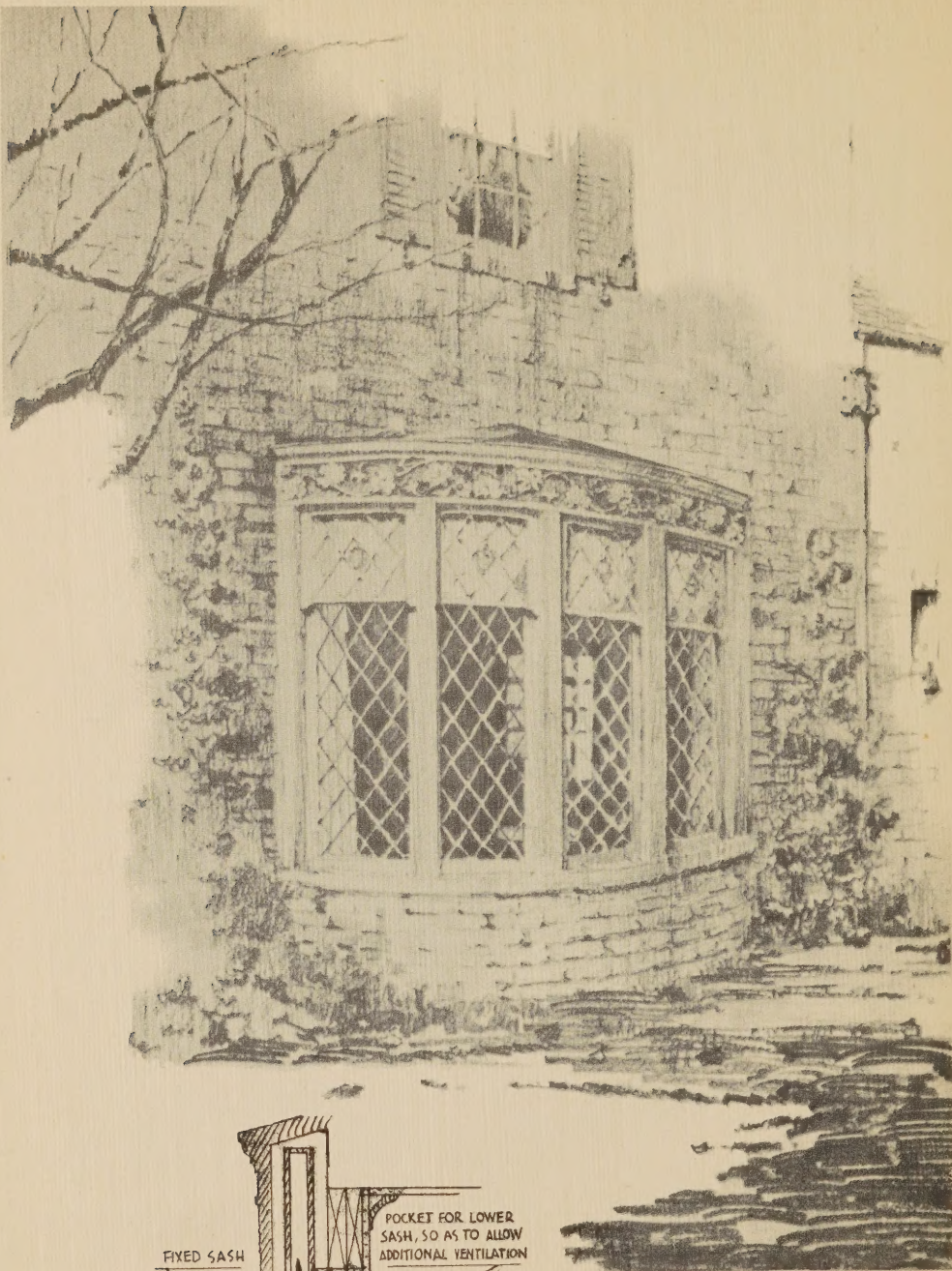
No. 135

As a general thing when glassware and potted plants are to be exhibited in a window, the window is constructed as a fixed sash because in this way the unsightly meeting rail may be omitted and it is possible to secure a larger window that will permit such exhibits to be made in a decorative fashion. This design includes the architectural features of a fixed sash for the display of glassware and potted plants and provides the advantage that the sash may be raised entirely out of sight in a sash pocket above the head of the window.

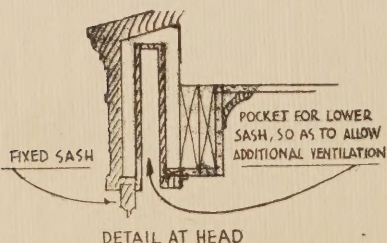


No.122B

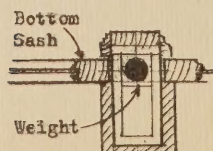
This illustration shows a double hung window so constructed as to allow a clear opening of same width and height as regular door. The sash slide up into head pocket on continued weight box and jamb member, and panels below form two doors hinged at jambs that swing back inside against wall when the sash are up. When window and panels are in open position the shutters will serve as doors to the opening.



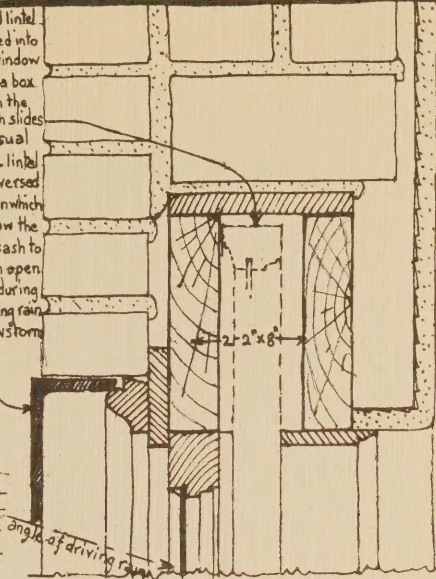
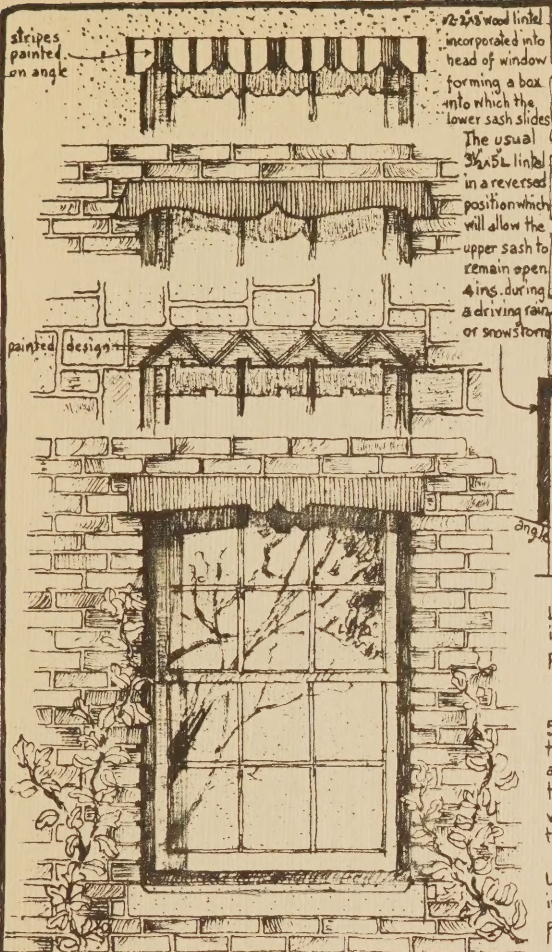
No. 84A



DETAIL AT HEAD



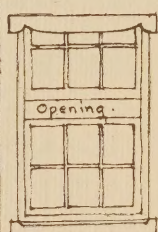
As top sash is fixed, sash run and parting bead are eliminated, giving the mullion an appearance of a solid timber. To reduce width of mullion, the sash are counterbalanced with the adjacent sash so that but one set of weights is required.



Lower sash in raised position

5 1/2" clearance to allow passage of the arm to wash the window on the outside

Upper sash in lowered position.



SKETCH SHOWING SASH IN REVERSED POSITION

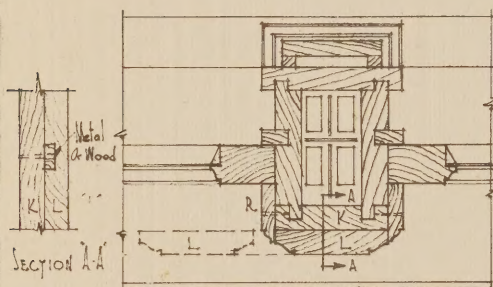
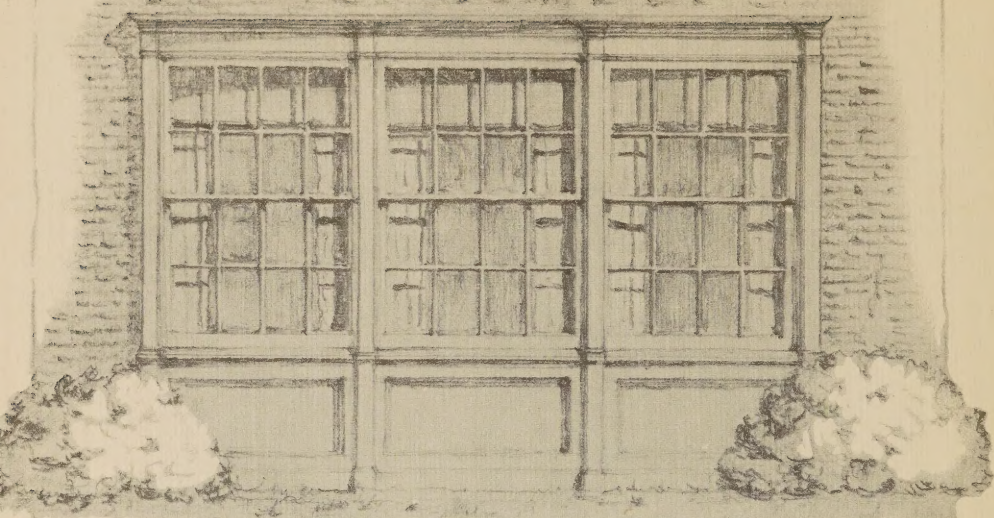
A FEW SUGGESTIONS FOR HEADS.

DETAIL OF HEAD OF WINDOW

Jamb and sill remain as in accepted practice

These details illustrate a new idea in the construction of the head of double hung windows with the following advantages.

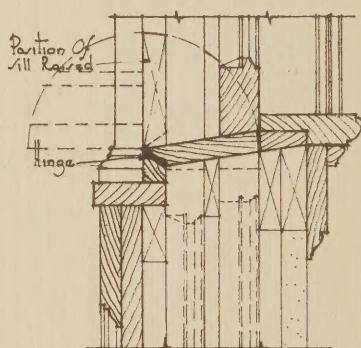
- ① The wood lintel is part of the frame and is thus in place at the time the frame is set which saves the carpenter's labor of cutting and placing it later, does not delay the mason, and anchors the frame securely to the wall.
- ② The steel lintel is reversed to form a canopy giving protection to the window, so that during storms or absences, the upper sash may be lowered to provide ventilation. The best ventilation of rooms in winter is obtained by lowering the upper sash slightly. This lintel-canopy protects the window shades and curtains from damage, and by keeping the lower sash closed, thus protects the stool from damage and radiators from cold freezing winds. This lintel also becomes a decorative feature of the window by simply cutting the lower edge, in the shop, to any design, or by decorating the face of it, and may be made to harmonize with any number of architectural styles. (see above)
- ③ The washing of the outside of double hung windows has heretofore been a difficult and dangerous task. By the lintel construction of this head, a pocket is formed into which the lower sash may be raised. When the upper sash is lowered to the sill there is a clearance between the two which allows the arm to be passed through and clean the sash on the outside while safely standing on the floor inside.



SECTION THRU MULLION

Trim "L" to be Slipped Into Place On Slots & Held Tight By Stops Which Are Screwed. Casing "K" Also Screwed To Allow Easy Access To Weights.

DETAILS SCALE 3"=1'-0"



SECTION SHOWING HINGED SILL TO ALLOW SASH TO DROP

A BAY WINDOW - -

This bay window has two features: the sill is built so that it allows the sash to be lowered into it; the sill is fastened on a hinge and the two stops fastened to it so that the sill can swing clear. The finish on the mullion is fastened on slots upon which the mullion slides. This trim is held in place by the stops which are screwed. The face of the casing is also screwed to allow it to be taken off without weakening the mill work of the casing.

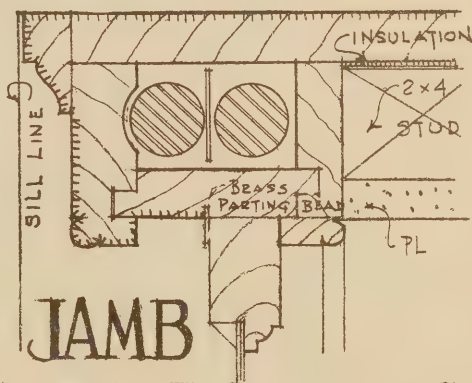




No. 51

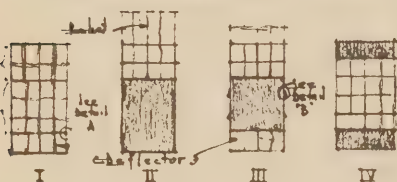
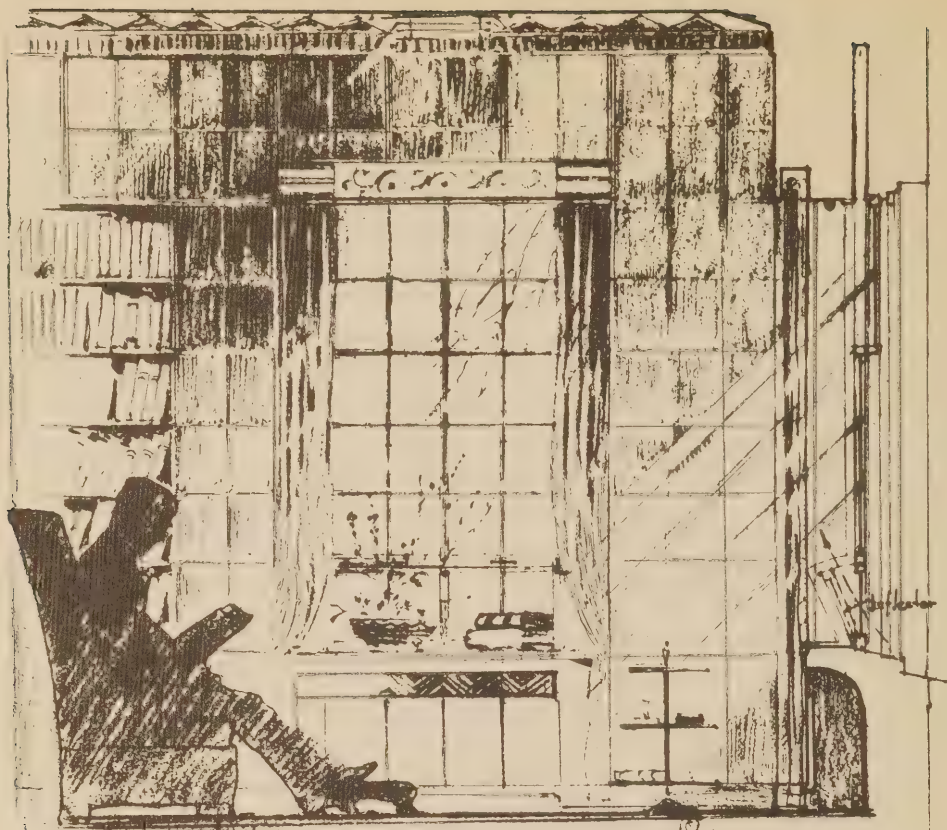
This sketch shows how double hung sash in a stair hall may be used to advantage from a standpoint of design, accessibility, ventilation, and economy. The windows are so placed that one comes above the landing and one below, making a continuous architectural motif. The windows placed in this manner give a continuous flood light to both upper and lower stair halls, with perfect safety, for the lower half of each sash may be fixed.

AN
EARLY
AMERICAN
DORMER



No. 119

This sketch of a dormer, derived directly from an Early American example in Virginia, illustrates the possibilities of using sash weights in this difficult type of window and yet maintaining a true and authentic design.



I FULLY CLOSED, OR WITH DRAUGHT-TIGHT DEFLECTOR.

II TWO-THIRDS OPEN ~ FOR WARM WEATHER.

III ONE-HALF OPEN WITH DEFLECTOR AT BOTTOM.

IV VENTILATION AT TOP AND BOTTOM.



DETAIL "B"

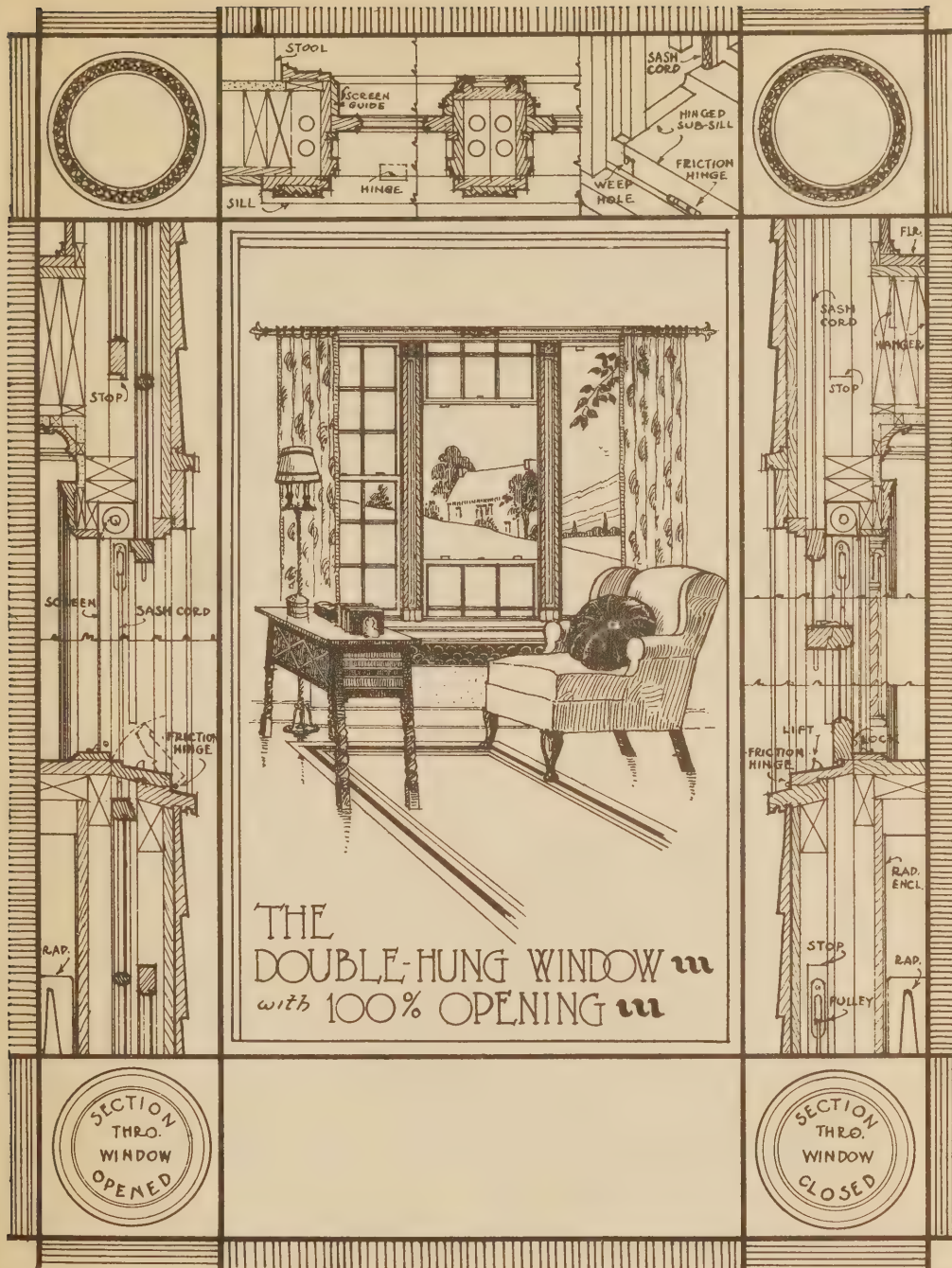


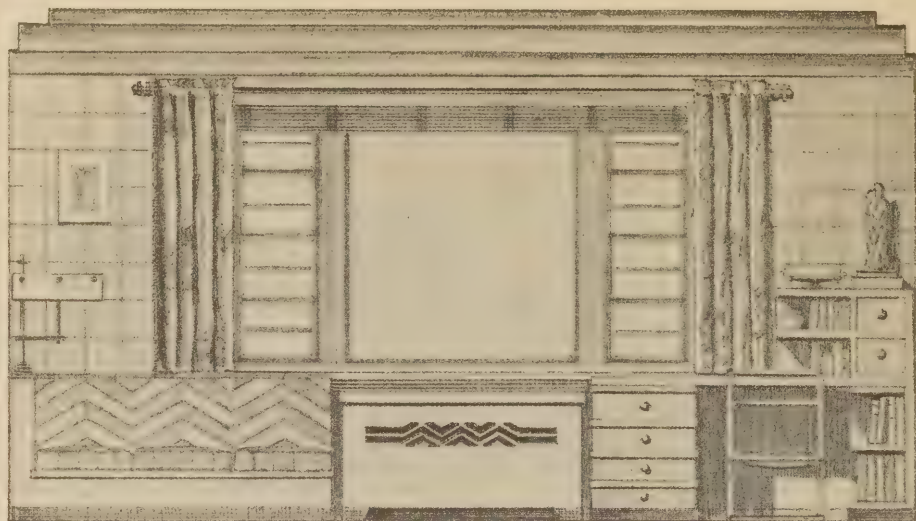
SECTION

NOTE - THE BOTTOM PORTION OF LOWER SASH MAY BE UNHOOKED & TILTED INWARD TO SERVE AS A DRAUGHT DEFLECTOR IN COLD WEATHER.

CENTER MEMBER STRENGTHENED IN ORDER TO LIGHTEN HORIZONTAL MEETING RAILS.

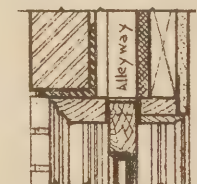
THE DESIGN OF A DOUBLE HUNG WINDOW





A MODERN LIVING ROOM

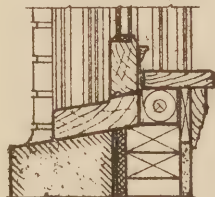
- SCALE - $\frac{1}{2}$ INCH = 1 FOOT -



- HEAD -



- MUNTIN -



- SILL -

- SCALE - $\frac{1}{4}$ " = 1'-0" -

DESIGN

Sash Cord Sash Cord

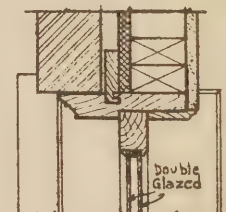


- VIEW SHOWING WINDOW OPEN -

SCALE - $\frac{3}{16}$ " = 1'-0"

OF

DOUBLE HUNG WINDOWS



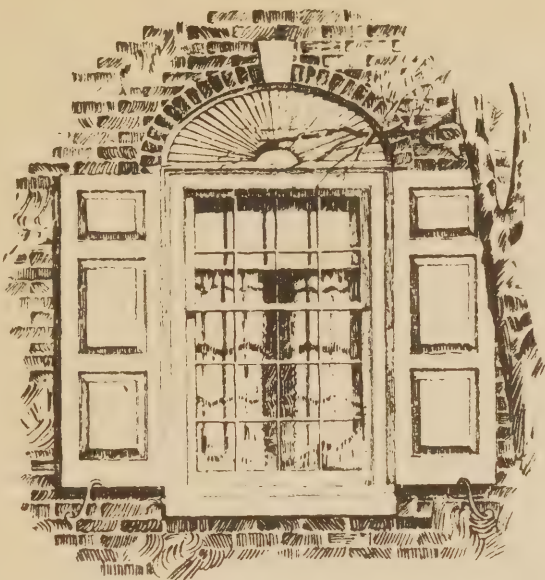
- JAMB -



- MULLION -

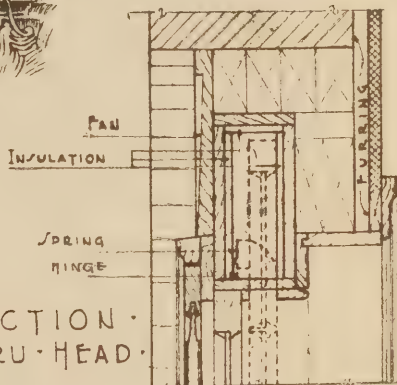
- SCALE - $\frac{1}{4}$ " = 1'-0" -

This design consists of a group of three windows with the center section larger than the side windows, undivided, to give a clear unobstructed vision from within. This center window would be made to slide up into an "alleyway" to within one foot of the entire opening, or, approximately six feet from the floor, which will allow the average person to open and close the window without undue strain. The side windows are to be stationary, or they may open, and the center window shall remain stationary, as may be desired.



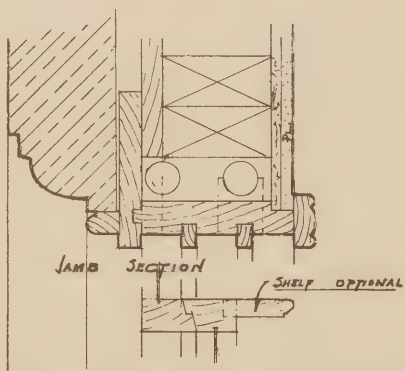
· ELEVATION ·

· THIS · WINDOW · IS ·
 · DESIGNED · TO · ALLOW · $\frac{3}{4}$ ·
 · OF · THE · OPENING · FOR ·
 · VENTILATION · — · $\frac{1}{8}$ ·
 · ENTERING · THE · BOX ·
 · HEAD · OF · THE · FRAME ·

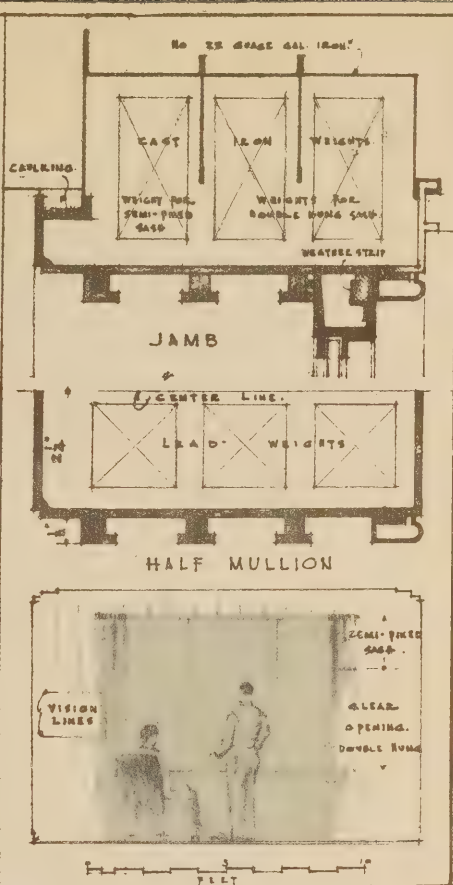
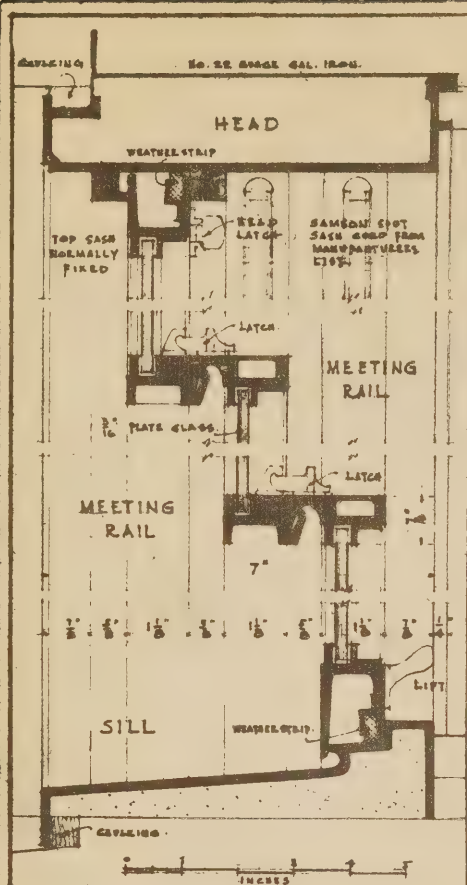


· SECTION ·
 · THRU · HEAD ·

DOUBLE · HUNG · WINDOWS



3 - SLIDING SASH AFFORDING 66% VENTILATION
 IN STANDARD WALL CONSTRUCTION.
 COLOR OF SASH COVS.—STAINED, NATURAL, OR ENAMELED



LEGEND
 EXTRUDED ALUMINUM
 SASH - COMBINATION
 FIXED AND DOUBLE-
 HUNG - TWO THIRDS
 OPENING FOR VENT-
 ILATION - TOP SASH
 NORMALLY FIXED BUT
 WEIGHTED FOR CLEANING



LEGEND
 1. MODERN APPEARANCE.
 2. LARGE OPENING FOR
 LIGHT AND AIR.
 3. CLEAR VISION LINES.
 4. NARROW MTG. RAILS.
 5. WEATHERTIGHT SASH.
 6. EASY TO OPERATE.
 7. EASY TO CLEAN.

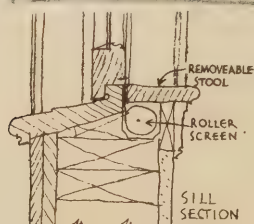
DESIGN FOR A DOUBLE-HUNG WINDOW

No. 62

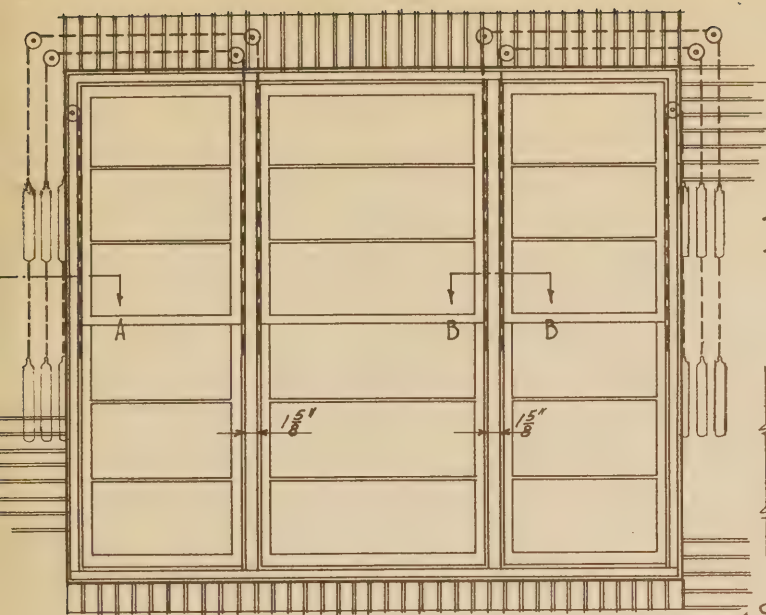
The upper third of the window is intended to be fixed except for the purpose of cleaning. The lower two thirds is double hung and may be entirely opened for light and air. Meeting rails are only $\frac{7}{8}$ in. thick and come where interference with vision is a minimum. All cleaning may be done from the inside.



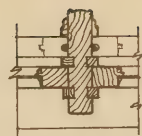
No. 150



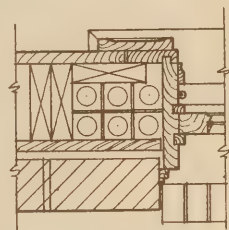
To eliminate the unsightly screen ordinarily used on outside, the use of roller screen installed at sill as shown and attached to the sash so that when sash is raised the screen is drawn up with it.



- E L E V A T I O N -
- S C A L E - $\frac{3}{4}'' = 1'-0''$ -



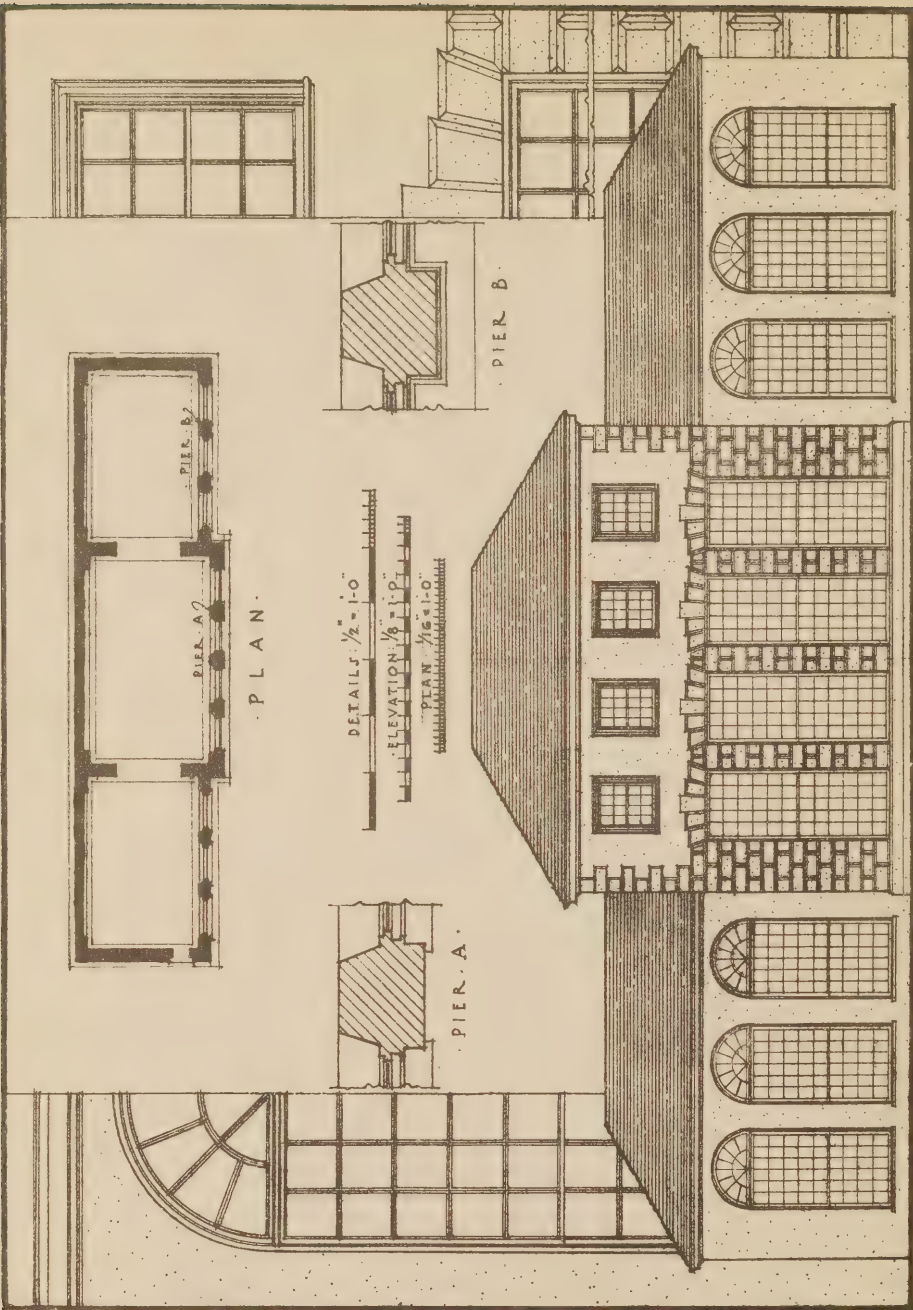
- SECTION - B-B -
- S C A L E - $1\frac{1}{2}'' = 1'-0''$ -



- SECTION - A-A -
- S C A L E - $1\frac{1}{2}'' = 1'-0''$ -

- - - THE - GROUPING - OF - DOUBLE - HUNG -
- WINDOWS - HAS - ALWAYS - PRESENTED - A -
- PROBLEM TO - THE - ARCHITECT - BECAUSE -
- OF - THE - UNSIGHTLY - WEIGHT - BOXES -
- FORMING - WIDE - MULLIONS - IN - THE - WIN -
- DOW - GROUP - - -

- - - AN - ATTRACTIVE - & - GRACEFULLY -
- MULLIONED - STUDIO - WINDOW - MAY - BE -
- ACHIEVED - IN - THE - MANNER - SHOWN - - -

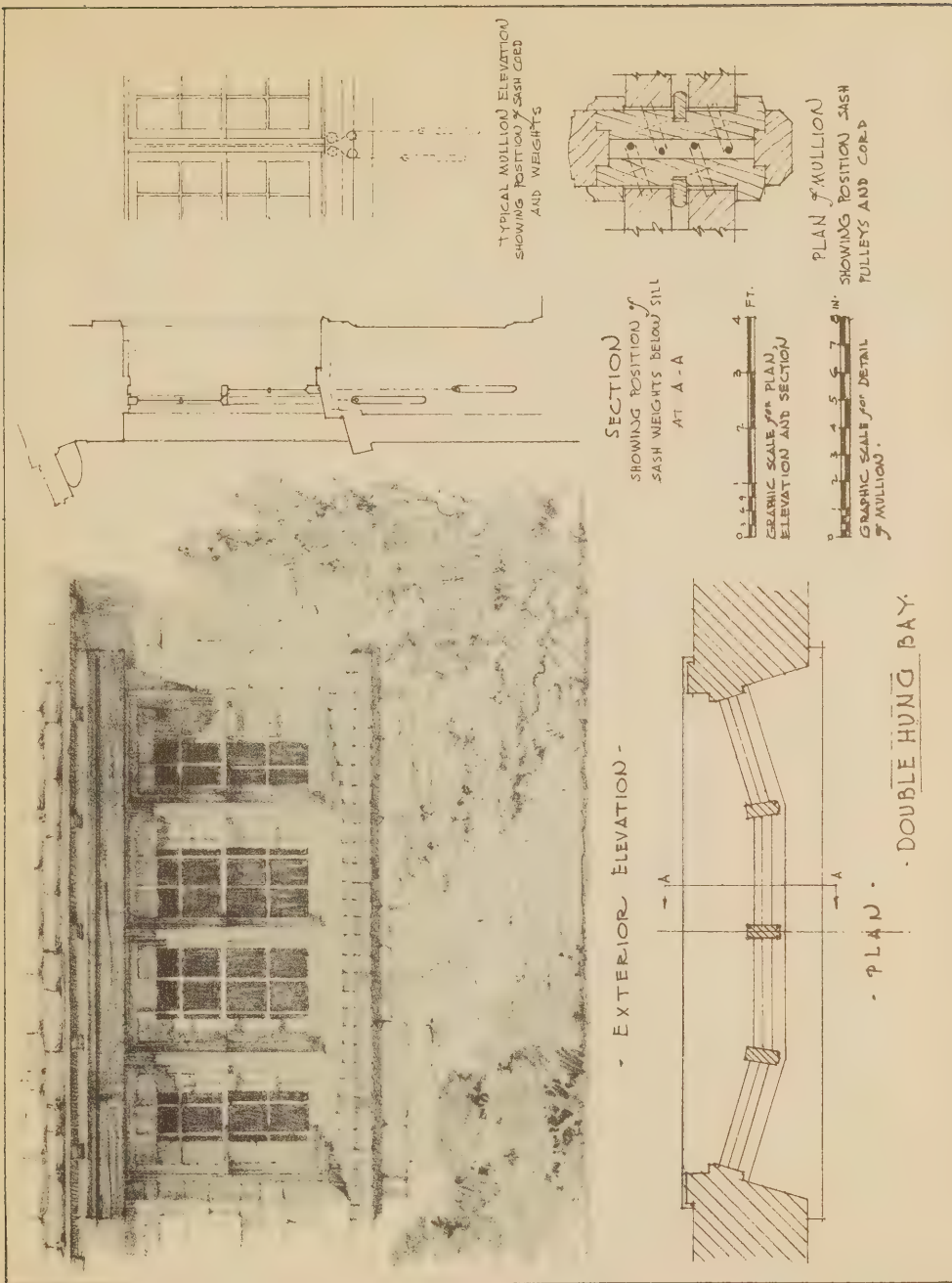


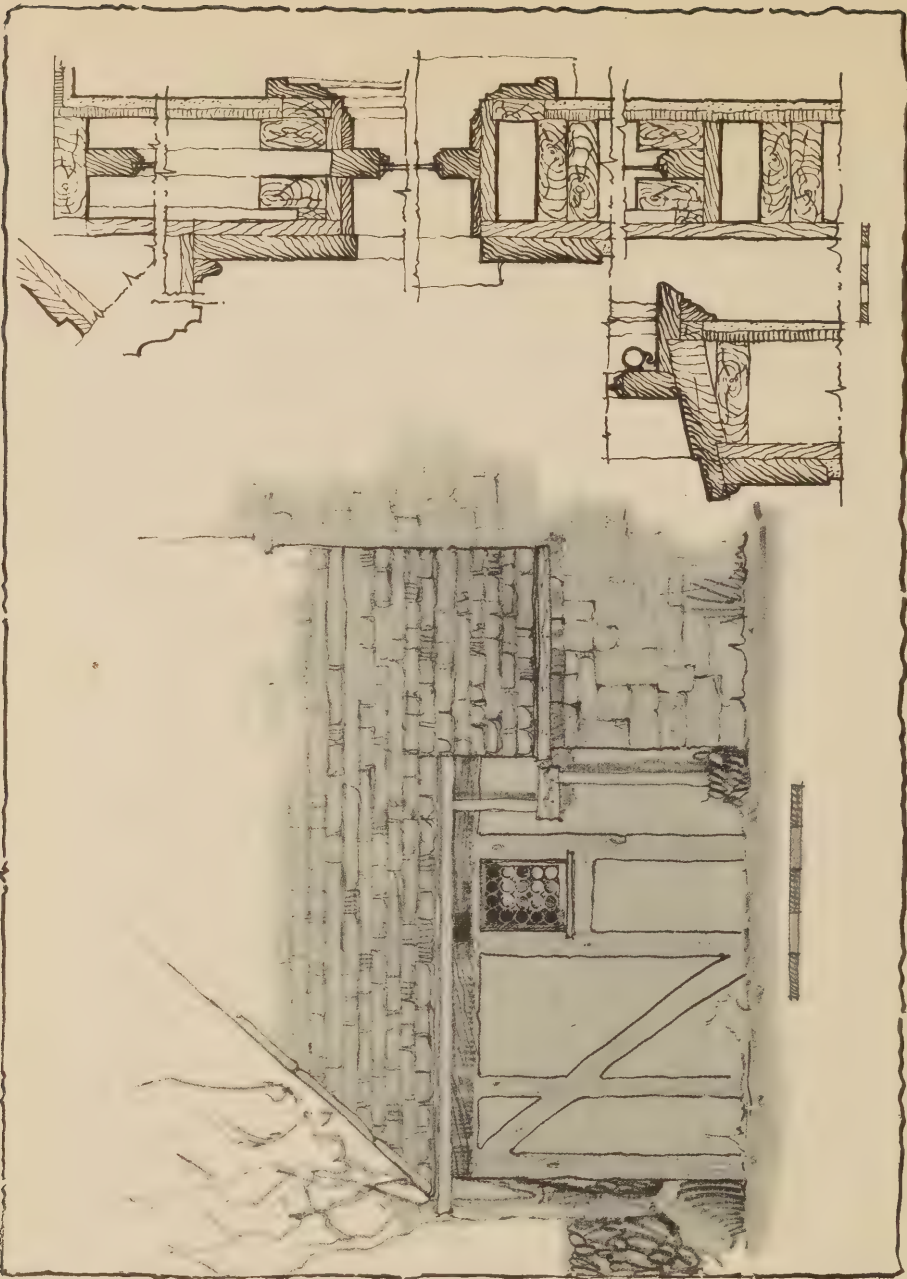
AN ORANGERY.

SHOWING THE USE OF DOUBLE-HUNG-SASH-COMBINING GOOD-EFFECT & UTILITY.

No. 52

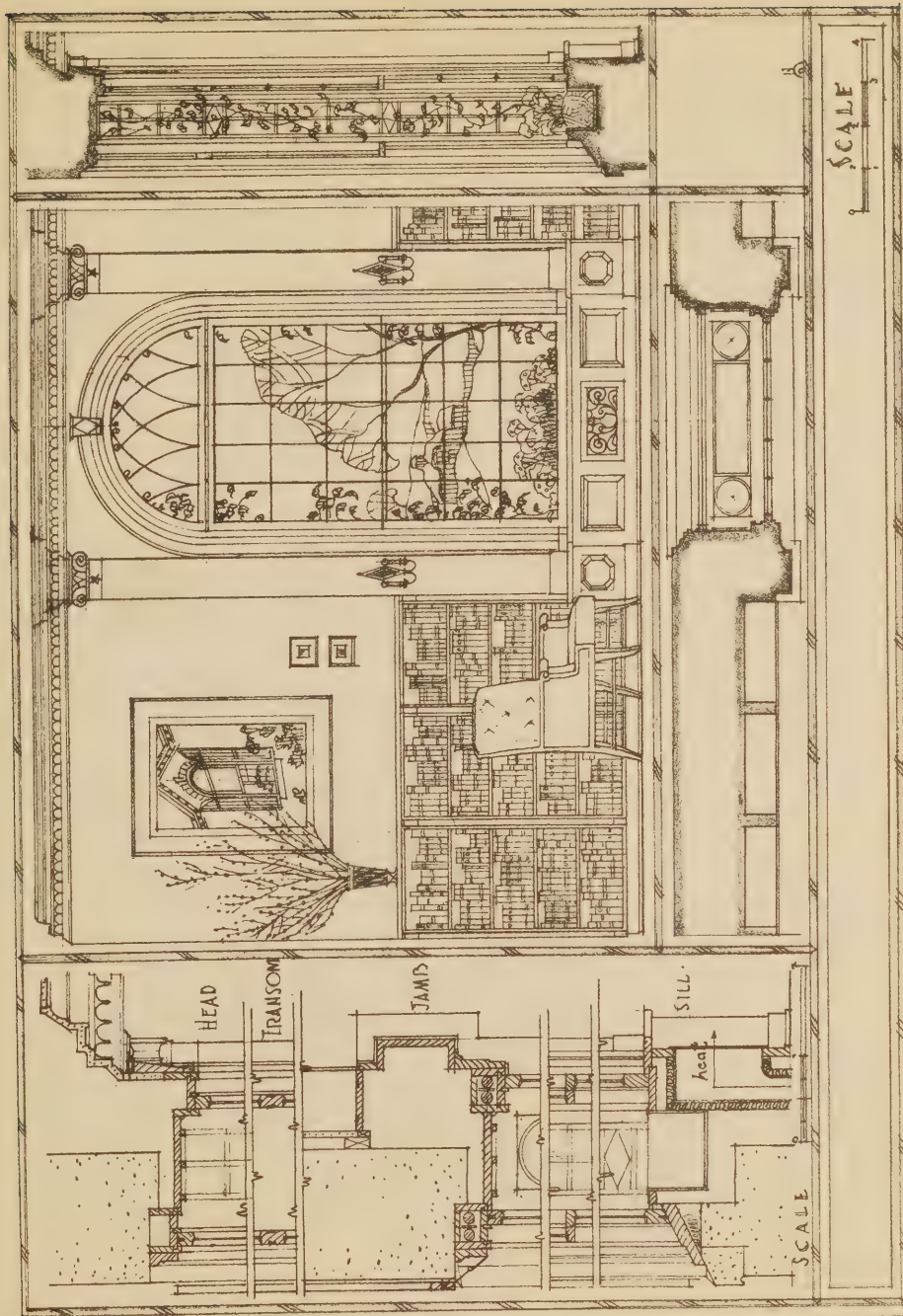
This design portrays clearly the desirable architectural effects obtained with the use of double hung sash in a utilitarian type of building where oranges or other tropical fruit can be raised. A maximum of light is necessary and it is important that a varying volume of ventilation be secured.





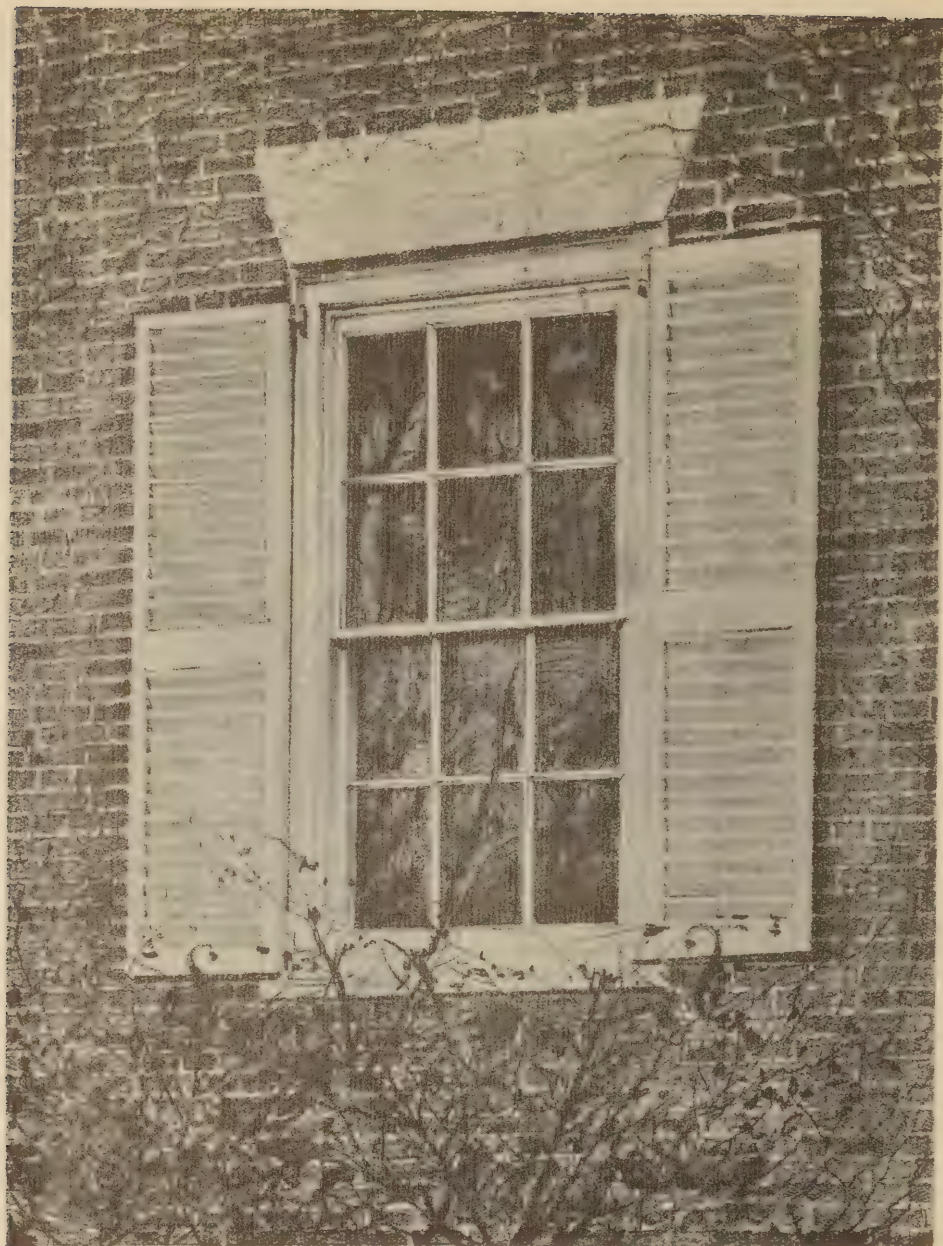
No. 58B

This window incorporates concealed sash cords, 100% ventilation, outside screens (a necessity in hail storm areas), the omission of an unsightly meeting rail, ease of operation, and adaptability to any type of draperies. It is very appropriate for dormers or groups of low windows where ceiling height permits the use of the sash pocket with joists or beams spaced to center on each side of the window.

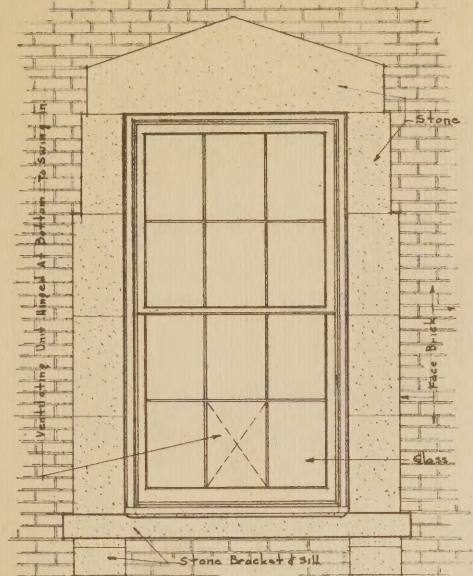


No. 87

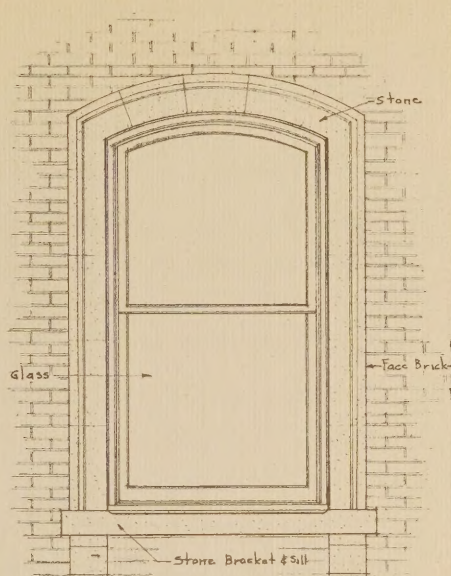
The outside walls are of stone. Extreme thickness from outside to inside walls is had by means of the heavy pilaster and bookcase treatment shown. Within this thickness are constructed two windows, a decorative window on the inside and a storm sash on the outside. Both windows operate by means of sliding sash with counter balancing weights. Both windows are glazed with polished plate glass.



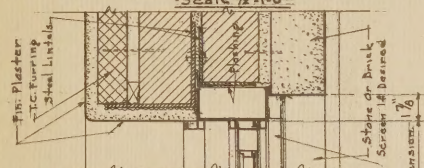
No.125 D



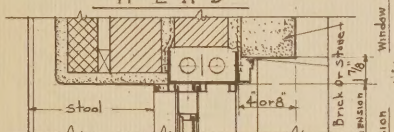
..ELEVATION..
..Scale 1/2"=1'-0"



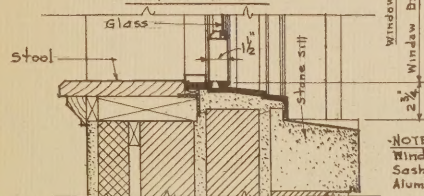
..ELEVATION..
..Scale 1/2"=1'-0"



..HEAD..
..Scale 1/2"=1'-0"



..JAMB..
..Scale 1/2"=1'-0"



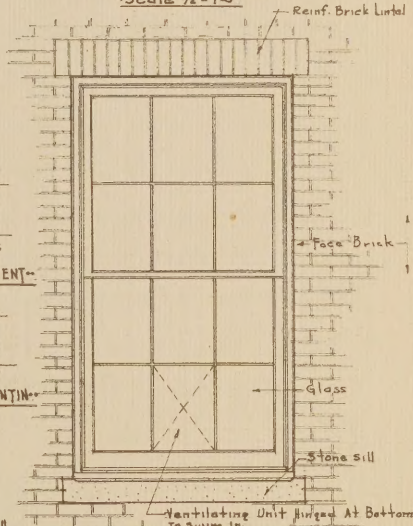
..SILL..
..Scale 1/2"=1'-0"



..MUNTIN-AT-VENT..
..Scale 1/2"=1'-0"



..TYPICAL MUNTIN..
..Scale 1/2"=1'-0"



..ELEVATION..
..Scale 1/2"=1'-0"

..NOTE..
Window Frame - Sill
Sash & Muntins Are
Aluminum.

..1 1/2" SCALE DETAILS OF DOUBLE HUNG WINDOWS..

This design is of a double hung aluminum window using sash cord. The window has a ventilating unit in the lower sash between the bottom stile and muntins, that is hinged at the bottom and swings in. Due to the angle in which the vent opens, the air that blows in from outside will be blown up toward the ceiling instead of straight in. This is designed so that it is not noticeable from outside or inside, except for a small line across the bottom part for the hinges.

SASH Cord is a small item in building construction, but after all, it is a combination of items—many small—which make up a complete structure. It is in small items that ultimate wear, annoyance, and repairs find their source. It is in small items that “corner cutting” of cost finds the least justification.

Sash Cord should be of the best quality and it should be specified by a brand name which has a definite quality meaning. Samson Spot Sash Cord is made in one grade only. When it is specified there can be but one interpretation of the specifications.

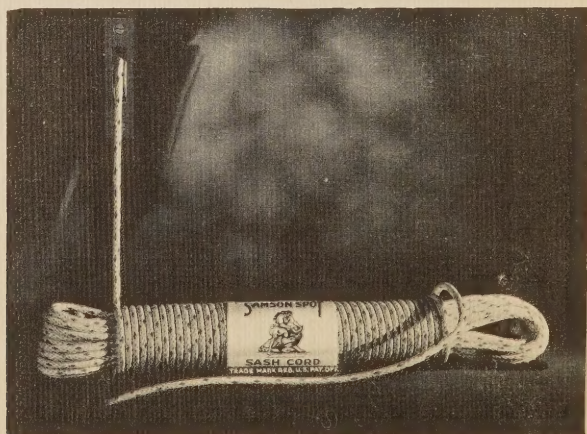
Samson Spot Sash Cord is identified by label and by our trade mark, the colored spots (registered in the U. S. Patent Office) which are used only in this extra quality cord.

In urging upon architects the advisability of specifying Samson Spot Sash Cord by name we do not feel that any claims of superior durability need to be offered. This cord has been used for 40 years, and its quality fully demonstrated.

We do want to emphasize the importance of omitting from specifications the words “or its equivalent” for the reason that such practice destroys the real meaning of a definite specification.

There are other good sash cords on the market and many slightly lower in price and much inferior in quality. Only by definitely specifying Samson Spot can penny saving evasion be prevented.

Samson Spot Cord is sold in every city in the United States. There is no need of substitution. Specify **SAMSON SPOT SASH CORD**.



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